

# CONTROL DATA® 844-41 MASS STORAGE SUBSYSTEM

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**CONTROL DATA**  
CORPORATION



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The CONTROL DATA Model 844-41 Mass Storage Subsystem consists of up to eight 844-41 Disk Storage Units with associated single or dual 7054-41, -42 Storage Controllers. This provides a large-capacity, multi-access storage subsystem, using removable disk packs. Each drive has a usable capacity of 1422 million bits; a full subsystem with eight on-line drives has a capacity of 11.4 billion bits. Additional data may be stored off-line using Model 883 Disk Packs.

Each 844-41 cabinet contains a single drive mechanism and thus permits the addition of one disk-storage unit at a time.

A bit-packing method, providing 4,040 bits per inch, coupled with a track density of 384 tracks per inch, yields the total usable capacity of 1,422 million bits per drive. Head positioning is controlled by a voice-coil positioner, with an average positioning time of 30 milliseconds. The disk rotates at 3600 RPM, providing an average latency time of 8.3 milliseconds. The high bit density and rotational speed combine to provide a transfer rate of 6.45 million bits per second.

The 7054-41 and -42 Disk Controllers are used with the CDC® CYBER 170, CDC CYBER 70 Models 72, 73, and 74 or CDC 6000 Series. Each Controller will allow an intermix of 844-41 and 844-21 Disk Storage Units in the subsystem and will automatically recognize unit type and address accordingly. Using a single controller, it is possible to perform multiple-overlapped seek operations concurrently with one read or write operation. Two controllers in a subsystem provide two simultaneous data transfers (read and/or write) to any two drives, while retaining the multiple-seek feature.

CDC Model 883 Disk Packs are used with the 844-41 Disk Storage Units. The 883 consists of a stack of eleven, 14-inch diameter, magnetic-recording disks. Nineteen surfaces are used for data recording and one is used for permanently-recorded positioning information. Because there is a difference in the number of servo positioning tracks between this pack and the 881 Disk Pack used on the 844-21, pack interchangeability is not possible.

## *SPECIFICATIONS*

### *Capacity (per drive)*

*Sector Sizes:* 644 characters (3,864 bits)  
*Track Capacity:* 24 Sectors  
*Tracks per Surface:* 808  
*Number of Data Surfaces:* 19  
*Capacity (8 drives):* 11.4 billion bits  
(1422 million bits/drive)  
*Transfer rate:* 6.45 million bits per second

### *Positioning Time*

*Minimum:* 10 milliseconds  
*Maximum:* 55 milliseconds  
*Average:* 30 milliseconds  
*Rotational Speed:* 3600 RPM  
*Average Latency Time:* 8.3 milliseconds  
*Disk Pack:* Type CDC 883 or equivalent

## *Physical Dimensions and Weight*

*Height:* 39.5 inches  
*Depth:* 44.5 inches  
*Width:* 22 inches  
*Weight:* 700 pounds

## *Power Requirements*

*Power Source:* 208 VAC, 3 phase, 60 Hz or  
220 VAC, 3 phase, 50 Hz

## *ENVIRONMENTAL*

*Operating Temperature:* 60°F to 90°F  
*Operating Humidity:* 20% to 80% R.H.  
*Non-Operating Temperature:* —30°F to 150°F  
*Non-Operating Humidity:* 5% to 95% R.H.

*Specifications subject to change without notice.*